CALIFORNIA HIGH-SPEED TRAIN

Program Environmental Impact Report/Environmental Impact Statement

Los Angeles to San Diego via Inland Empire

Biological Resources Technical Evaluation

January 2004

Prepared for:

California High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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CALIFORNIA HIGH-SPEED TRAIN PROGRAM EIR/EIS

Task 2.4

Los Angeles to San Diego via Inland Empire

Biological Resources Technical Evaluation

Prepared by:

HNTB

in association with

CH2MHILL

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ACRONYMS

ARB	Air Reserve Base
Authority	California High-Speed Rail Authority
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRC	chamise redshank chaparral
CSC	coastal sage scrub
CWA	Clean Water Act
DOI	Department of Interior
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GIS	Geographic Information System
HCP	Habitat Conservation Plan
HST	high-speed train
I	Interstate
Km/h	kilometers per hour
LOSSAN	rail corridor from Los Angeles to San Diego through Orange County
MCAS	Marine Corps Air Station
MMRP	Mitigation Monitoring and Reporting Plan
Mph	miles per hour
MSHCP	Multiple Species Habitat Conservation Plan
NAS	Naval Air Station
NCCP	Natural Community Conservation Plan

NEPA	National Environmental Policy Act
NWI	National Wetlands Inventory Database
ONT	Ontario International Airport
RCIP	Riverside County Integrated Project
RTP	Regional Transportation Plans
RWQCB	Regional Water Quality Control Board
SAMP	Special Area Management Plan
SAN	San Diego International Airport
SPCCP	Spill Prevention Control and Countermeasure Plan
SR	State Route
STIP	State Transportation Improvement Program
SWPPP	Storm Water Pollution Prevention Plan
U.S.	United States
UP	Union Pacific
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 INTRODUCTION

The California High-Speed Rail Authority (Authority) was created by the Legislature in 1996 to develop a plan for the construction, operation, and financing of a statewide, intercity high-speed passenger train system.[1] After completing a number of initial studies over the past 6 years to assess the feasibility of a high-speed train system in California and to evaluate the potential ridership for a variety of alternative corridors and station areas, the Authority recommended the evaluation of a proposed high-speed train system as the logical next step in the development of transportation infrastructure in California. The Authority does not have responsibility for other intercity transportation systems or facilities, such as expanded highways, or improvements to airports or passenger rail or transit used for intercity trips.

The Authority adopted a Final Business Plan in June 2000, which reviewed the economic feasibility of a 1,127-kilometer-long (700-mile-long) high-speed train system. This system would be capable of speeds in excess of 321.8 kilometers per hour (200 miles per hour [mph]) on a dedicated, fully grade-separated track with state-of-the-art safety, signaling, and automated train control systems. The system described would connect and serve the major metropolitan areas of California, extending from Sacramento and the San Francisco Bay Area, through the Central Valley, to Los Angeles and San Diego. The high-speed train system is projected to carry a minimum of 42 million passengers annually (32 million intercity trips and 10 million commuter trips) by the year 2020.
Following the adoption of the Business Plan, the appropriate next step for the Authority to take in the pursuit of a high-speed train system is to satisfy the environmental review process required by federal and state laws, which in turn will enable public agencies to select and approve a high-speed rail system, define mitigation strategies, obtain necessary approvals, and obtain financial assistance necessary to implement a high-speed rail system. For example, the Federal Railroad Administration (FRA) may be requested by the Authority to issue a Rule of Particular Applicability, which establishes safety standards for the high-speed train system for speeds over 200 mph and for the potential shared use of rail corridors.

The Authority is the project sponsor and the lead agency for purposes of the California Environmental Quality Act (CEQA) requirements. The Authority has determined that a Program Environmental Impact Report (EIR) is the appropriate CEQA document for the project at this conceptual stage of planning and decisionmaking, which would include selecting a preferred corridor and station locations for future right-of-way preservation and identifying potential phasing options. No permits are being sought for this phase of environmental review. Later stages of project development would include project-specific detailed environmental documents to assess the impacts of the alternative alignments and stations in those segments of the system that are ready for implementation.

The decisions of federal agencies, particularly the FRA related to high-speed train systems, would constitute major federal actions regarding environmental review under the National Environmental Policy Act (NEPA). NEPA requires federal agencies to prepare an environmental impact statement (EIS) if the proposed action has the potential to cause significant environmental impacts. The proposed action in California warrants the preparation of a Tier 1 Program-level EIS under NEPA, due to the nature and scope of the comprehensive high-speed train system proposed by the Authority, the need to narrow the range of alternatives, and the need to protect/preserve right-of-way in the future. FRA is the federal lead agency for the preparation of the Program EIS, and the Federal Highway Administration (FHWA), the United Stated (U.S.) Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers (USACE), the Federal Aviation Administration (FAA), the U.S. Fish and Wildlife Service (USFWS), and the Federal Transit Administration (FTA) are cooperating federal agencies for the EIS.

A combined Program EIR/EIS is to be prepared under the supervision and direction of the FRA and the Authority in conjunction with the federal cooperating agencies. It is intended that other federal, state,

[1] Chapter 796 of the Statutes of 1996; SB 1420, Kopp and Costa

regional, and local agencies will use the Program EIR/EIS in reviewing the proposed program and developing feasible and practicable programmatic mitigation strategies and analysis expectations for the Tier 2 detailed environmental review process that would be expected to follow any approval of a high-speed train system.

The statewide high-speed train system has been divided into five regions for study: Bay Area-Merced, Sacramento-Bakersfield, Bakersfield-Los Angeles, Los Angeles-San Diego via the Inland Empire, and Los Angeles-Orange County-San Diego. This discipline-specific *Biological Resources and Jurisdictional Waters Technical Evaluation* for the Los Angeles to San Diego via the Inland Empire region is one of five such reports being prepared for each of the regions on the topic. It is 1 of 11 technical evaluations for this region. This evaluation will be summarized in the Program EIR/EIS, and it will be part of the administrative record supporting the environmental review of alternatives.

1.1 ALTERNATIVES

1.1.1 No-Project Alternative

The No-Project Alternative serves as the baseline for the comparison of Modal and High-Speed Train Alternatives. The No-Project Alternative represents the state's transportation system (highway, air, and conventional rail) as it existed in 1999-2000, and as it would be after implementation of programs or projects currently programmed for implementation and projects that are expected to be funded by 2020 (Figure 1.2-1). The No-Project Alternative addresses the geographic area serving the same intercity travel market as the proposed high-speed train (generally from Sacramento and the San Francisco Bay Area, through the Central Valley, to Los Angeles and San Diego). The No-Project Alternative satisfies the statutory requirements under CEQA and NEPA for an alternative that does not include any new action or project beyond what is already committed.

The No-Project Alternative defines the existing and future statewide intercity transportation system based on programmed and funded (already in funded programs/financially constrained plans) improvements to the intercity transportation system through 2020, according to the following sources of information:

- State Transportation Improvement Program (STIP)
- Regional Transportation Plans (RTPs) for all modes of travel
- Airport plans
- Intercity passenger rail plans (California Rail Plan 2001-2010, Amtrak 5- and 20-Year Plans)

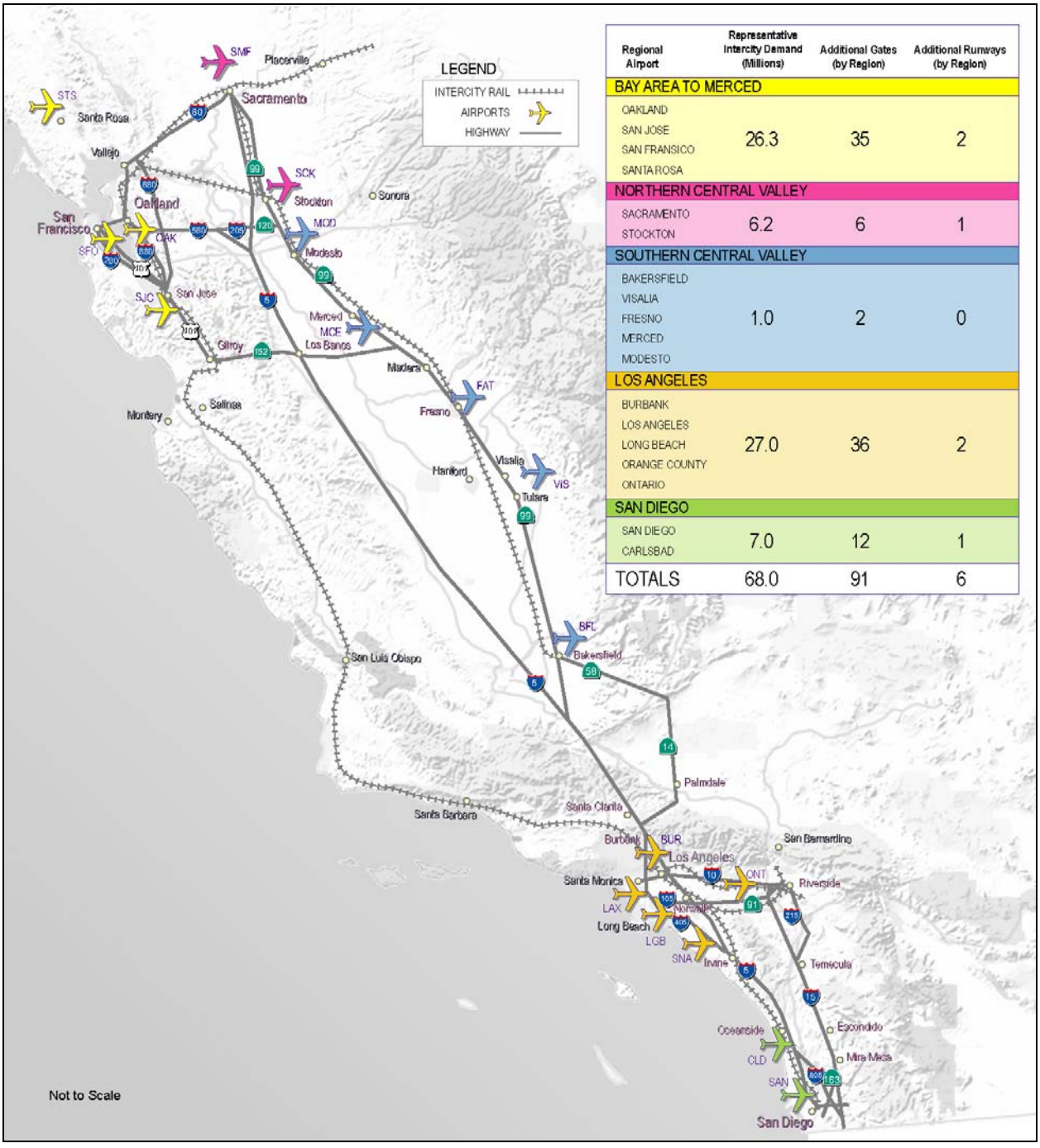
As with all of the alternatives, the No-Project Alternative will be assessed against the purpose and need topics/objectives for congestion, safety, air pollution, reliability, and travel times.

1.1.2 Modal Alternative

There are currently three main options for intercity travel between the major urban areas of San Diego, Los Angeles, the Central Valley, San Jose, Oakland/San Francisco, and Sacramento: vehicles on the interstate highway system and state highways, commercial airlines serving airports between San Diego and Sacramento and the Bay Area, and conventional passenger trains (Amtrak) on freight and/or commuter rail tracks. The Modal Alternative consists of expansion of highways, airports, and intercity and commuter rail systems serving the markets identified for the High-Speed Train Alternative (Figures 1.2-2 and 1.2-3). The Modal Alternative uses the same intercity travel demand (not capacity) assumed under the high-end sensitivity analysis completed for the high-speed train ridership in 2020. This same travel demand is assigned to the highways, airports, and passenger rail described under the No-Project Alternative.

Figure 1.2-1 No-Project Alternative – California Transportation System

Figure 1.2-2 Modal Alternative – Highway Component



Regional Airport	Representative Intercity Demand (Millions)	Additional Gates (by Region)	Additional Runways (by Region)
BAY AREA TO MERCED			
OAKLAND SAN JOSE SAN FRANSICO SANTA ROSA	26.3	35	2
NORTHERN CENTRAL VALLEY			
SACRAMENTO STOCKTON	6.2	6	1
SOUTHERN CENTRAL VALLEY			
BAKERSFIELD VISALIA FRESNO MERCED MODESTO	1.0	2	0
LOS ANGELES			
BURBANK LOS ANGELES LONG BEACH ORANGE COUNTY ONTARIO	27.0	36	2
SAN DIEGO			
SAN DIEGO CARLSBAD	7.0	12	1
TOTALS	68.0	91	6

Figure 1.2-3 Modal Alternative – Aviation Component

The additional improvements or expansion of facilities are assumed to meet the demand, regardless of funding potential and without high-speed train service as part of the system.

The Modal Alternative for the Los Angeles to San Diego via the Inland Empire region consists of two major proposed improvements:

- Improvements to Highways: Consisting of additional highway lanes to provide sufficient highway capacity and associated interchange reconfiguration, crossing bridge widening, ramp widening, cross street and intersection widening (Figure 1.2-2). Within the study area corridor, these improvements, therefore, would occur along proposed portions of Interstates (I-) 10, 215, 15, and State Route (SR) 163. Table 1.2-1 lists the proposed highway improvements along the Los Angeles to San Diego via the Inland Empire corridor.

Table 1.2-1 Proposed Modal Alternative Highway Improvements Los Angeles to San Diego via the Inland Empire

Highway Corridor	Segment (From – To)	No. of Additional Lanes[1] (Total – Both Directions)	No. of Existing Lanes (Total - Both Directions)	Type of Improvement
I-10	I-5 to East San Gabriel Valley	2	10	widening
I-10	East San Gabriel Airport to Ontario Airport	2	8	widening
I-10	Ontario Airport to I-15	2	8	widening
I-10	I-15 to I-215	2	8	widening
I-15	I-10-I-215	2	8	widening
I-215	Riverside to I-15	2	4	widening
I-215	I-10 to Riverside	2	6	widening
I-15	I-215 to Temecula	2	10	widening
I-15	Temecula to Escondido	2	8	widening
I-15	Escondido to Mira Mesa	2	10	widening
I-15	Mira Mesa to SR-163	2	10	widening
SR-163	I-15 to I-8	2	8	widening

[1] Represents the number of through lanes in addition to the total number of existing lanes that approximate an equivalent level of capacity to serve the representative demand

- Improvements to Airports: Primarily consisting of improvements to terminal gates and runways to provide sufficient landside and airside capacity and associated taxiways, ground access, parking, terminal and support facilities and airports that can serve the same geographic area and demand as the proposed High-Speed Train (HST) Alternative. Within the study area corridor, these proposed improvements would occur at Ontario International Airport (ONT) and the San Diego International Airport (SAN) (Figure 1.2-3). Table 1.2-2 lists the airport improvements associated with the Ontario and San Diego airports.

Table 1.2-2 Proposed Modal Alternative Airport Improvements – Year 2020 Los Angeles to San Diego via the Inland Empire

Airport Name	Additional Gates	Additional runways
Ontario International Airport	8	1
San Diego International Airport	12	1

Source: Parsons Brinckerhoff, November 2002

1.1.3 High-Speed Train Alternative

The Authority has defined a statewide high-speed train system capable of speeds in excess of 200 miles per hour (mph) (320 kilometers per hour [km/h]) on dedicated, fully grade-separated tracks, with state-of-the-art safety, signaling, and automated train control systems. State-of-the-art, high-speed, steel-wheel-on-steel-rail technology is being considered for the system that would serve the major metropolitan centers of California, extending from Sacramento and the San Francisco Bay Area, through the Central Valley, to Los Angeles and San Diego (Figure 1.2-4).

The High-Speed Train Alternative includes several corridor and station options. A steel-wheel-on-steel-rail, electrified train, primarily on exclusive right-of-way with small portions of the route on shared track with other rail is planned. Conventional "nonelectric" improvements are also being considered along the existing rail corridor from Los Angeles to San Diego through Orange County (LOSSAN). The train track would be at grade, in an open trench or tunnel, or on an elevated guideway, depending on terrain and physical constraints.

For purposes of comparative analysis the high-speed train corridors will be described from station to station within each region, except where a bypass option is considered when the point of departure from the corridor will define the end of the corridor segment.

As described in the introduction, the study area is broadly defined by the Los Angeles to San Diego via Inland Empire corridor segment, which may be broadly divided into three regional segments. Each segment has several alternative alignments for all or a portion of the length of the segment. For example, Segment 1 has three alternative alignments, listed as 1A, 1B, and 1C. Each segment is further subdivided into subsegments for analyzing and reporting potential impacts. The various segment options and subsegments, along with station locations, are described below.

1.1.3.1 Regional Segment 1 – Union Station to March Air Reserve Base Segment

Segment 1A

Subsegment 1A1: Union Station to Pomona
Subsegment 1A2: Pomona to Ontario (beginning of Segment 1C)
Subsegment 1A3: Ontario (beginning of Segment 1C) to Colton (end of Segment 1C)
Subsegment 1A4: Colton to March Air Reserve Base (ARB)

Segment 1B

Subsegment 1B1: Union Station to Pomona

Segment 1C

Subsegment 1C1: Ontario (beginning of Segment 1C) to Colton (end of Segment 1C)

Station Locations: El Monte (1A1), Pomona (1A2), Ontario (1A2), Colton (1A3), University of California at Riverside (1A4), South El Monte (1B1), City of Industry (1B1), and San Bernardino (1C1)

1.1.3.2 Regional Segment 2 – March ARB to Mira Mesa Segment

Segment 2A

Subsegment 2A1: March ARB to Escondido (beginning of Segment 2B)
Subsegment 2A2: Within Escondido (beginning to end of Segment 2B)
Subsegment 2A3: Escondido to Mira Mesa

Figure 1.2-4 High-Speed Train Alternative – Corridors and Stations for Continued Investigation

Segment 2B

Subsegment 2B1: Within Escondido (Beginning to end of Segment 2B)

Station Locations: March ARB (2A1), Temecula (2A2), Escondido (2A2), and Escondido Transit Center(2B1)

1.1.3.3 Regional Segment 3 – Mira Mesa to San Diego Segment

Segment 3A

Subsegment 3A1: Mira Mesa to Qualcomm Stadium

Segment 3B

Subsegment 3B1: Within Mira Mesa (beginning and end of Segment 3C)
Subsegment 3B2: Mira Mesa (end of Segment 3C) to Downtown San Diego

Segment 3C

Subsegment 3C1: Within Mira Mesa (end of Segment 3C)

Station Locations: Mira Mesa (3A1), Qualcomm Stadium (3A1), Transit Center (3B2), San Diego International Airport (3B2), and Downtown San Diego (3B2)

2.0 BASELINE/AFFECTED ENVIRONMENT

2.1 STUDY AREA

The study area is broadly defined by the Los Angeles to San Diego via the Inland Empire corridor, which more or less represents the environmental setting for the No-Project Alternative (existing baseline conditions) and the High-Speed Train Alternative. This is because the proposed high-speed rail alignments closely parallel the I-10 (east-west) corridor and the I-215 (north-south) corridor. The alignment of the proposed highway improvements as part of the Modal Alternative follows the same east-west orientation along I-10 and the north-south orientation along I-215 for the most part. However, there are two segments where the Modal Alternative (highway improvements) route deviates from the main I-215 corridor. The first segment of this deviation occurs off I-10 just west of Fontana, where the alignment runs parallel to I-15 and rejoins the I-215 alignment near Murrieta. The second deviation occurs near Miramar, where the Modal Alternative runs adjacent to SR 163 towards downtown San Diego and I-5. Therefore, except for these small deviations along the I-215 corridor, the environmental setting and potential impacts to natural resources from the proposed Modal Alternative is also similar to the High-Speed Train Alternatives. Figure 2.1-1 depicts the alignment corridor for the Modal and High-Speed Train Alternative, along with the various station locations. Proposed highway and airport improvements under the Modal Alternative are also shown.

As described in Section 1.0, Executive Summary, the biological resources impact analysis study area for the entire corridor, including the various alignments and station locations, is defined by the following limits:

- 1,000 feet around stations and on both sides of the corridors in developed areas
- 0.25-mile around stations and on both sides of the corridors in undeveloped areas
- 0.50-mile around the stations and on both sides of the corridors in sensitive areas (lagoons/wildlife corridors)

For the HST Alternative, Segment 2 would include tunnels in portions of the alignment between Temecula and Escondido as well as in the vicinity of downtown Escondido. Biological resource impacts would not be expected in areas of this deep tunneling except at the tunnel portals. Therefore, areas of where the alignment would occur in a tunnel are not included in the tabulation of potential biological resource and wetland impacts.

2.2 GENERAL DESCRIPTION OF REGIONAL PHYSICAL CHARACTERISTICS AND VEGETATION COMMUNITIES

Generally, the topography along the entire corridor alignment along the east-west orientation, from Union Station to March ARB segment, is generally flat. The terrain remains relatively flat through Riverside and heading into Perris Valley and Sun City. However, the topography becomes relatively steep south of Murrieta and Temecula Valley (Romoland Quad) and further south towards Rainbow Valley (Temecula Quad). The terrain continues to be relatively steep until Escondido, along the north-south orientation, adjacent to the I-215 corridor. Steep terrain also occurs near the proposed Mira Mesa station (Segment 3A, Poway Quad) and further south of Carroll Canyon (Segment 3B, La Mesa Quad).

The dominant land use pattern from Union Station to Ontario Airport consists of heavily developed and urbanized settings. Except for small patches of annual grasslands, agricultural, and coastal sage

Figure 2.1-1 Modal and High-Speed Train Alternatives
Los Angeles to San Diego via Inland Empire

communities, there are no contiguous natural communities occurring along this segment. In the north-south orientation, the land cover is generally dominated by a patchwork of agricultural land use (orchards and vineyards) and urban areas along the I-215 corridor. Orchards and vineyards dominate south of the San Luis Rey River (Bonsall Quad) until north of Escondido. South of Lake Hodges, the land use is predominantly urban. South of Carroll Canyon towards the City of San Diego, Mission Bay, and San Diego Bay, the land use is heavily urbanized.

Numerous waters of the U.S., including unnamed drainage, traverse the segments. A majority of the bodies of water, or portions thereof, traversing the Union Station to March ARB proposed segment are channelized. These are urban streams and include the Los Angeles River, San Gabriel River, Rio Hondo, San Jose Creek (City of Industry), Etiwanda Channel, and Cucamonga Creek (City of Ontario). Figure 2.2-1 is a view of the San Gabriel River along Segment 1A.

Figure 2.2-1. View of San Gabriel River at Valley Boulevard, San Gabriel

Along the north-south segment (March ARB to Mira Mesa), Perris Valley storm drain (San Jacinto River Channel), San Clemente Canyon, Carroll Canyon, San Diego Aqueduct, San Diego River, Escondido Creek, and Cypress Canyon are channelized and occur in predominantly urbanized areas. Nonchannelized bodies of water along this alignment include Murrieta Creek, Rainbow Creek, San Luis Rey River, Keys Creek, San Marcos Creek, Lake Hodges/San Dieguito River, Los Penasquitos Canyon, Rose Canyon, and portions of Carroll Canyon.

Scattered freshwater wetlands associated with the drainage are found along the March ARB to Mira Mesa and Mira Mesa to San Diego segments. These include palustrine wetlands along Murrieta Creek, palustrine emergent marsh, artificially created emergent wetlands associated with San Luis Rey River, and lacustrine and palustrine emergent marshes in association with Lake Hodges and San DeGette Lagoon. Patches of San Diego mesa hardpan vernal pools occur near the proposed Mira Mesa Station just north of MCAS Miramar, south of Soledad Freeway, north of San Clemente Canyon (Segment 3A), just south of Escondido Freeway, and north of Carroll Canyon (Segment 3B).

Critical habitats, based on USFWS designations, are shown in Figures 2.2-2a, b, and c.

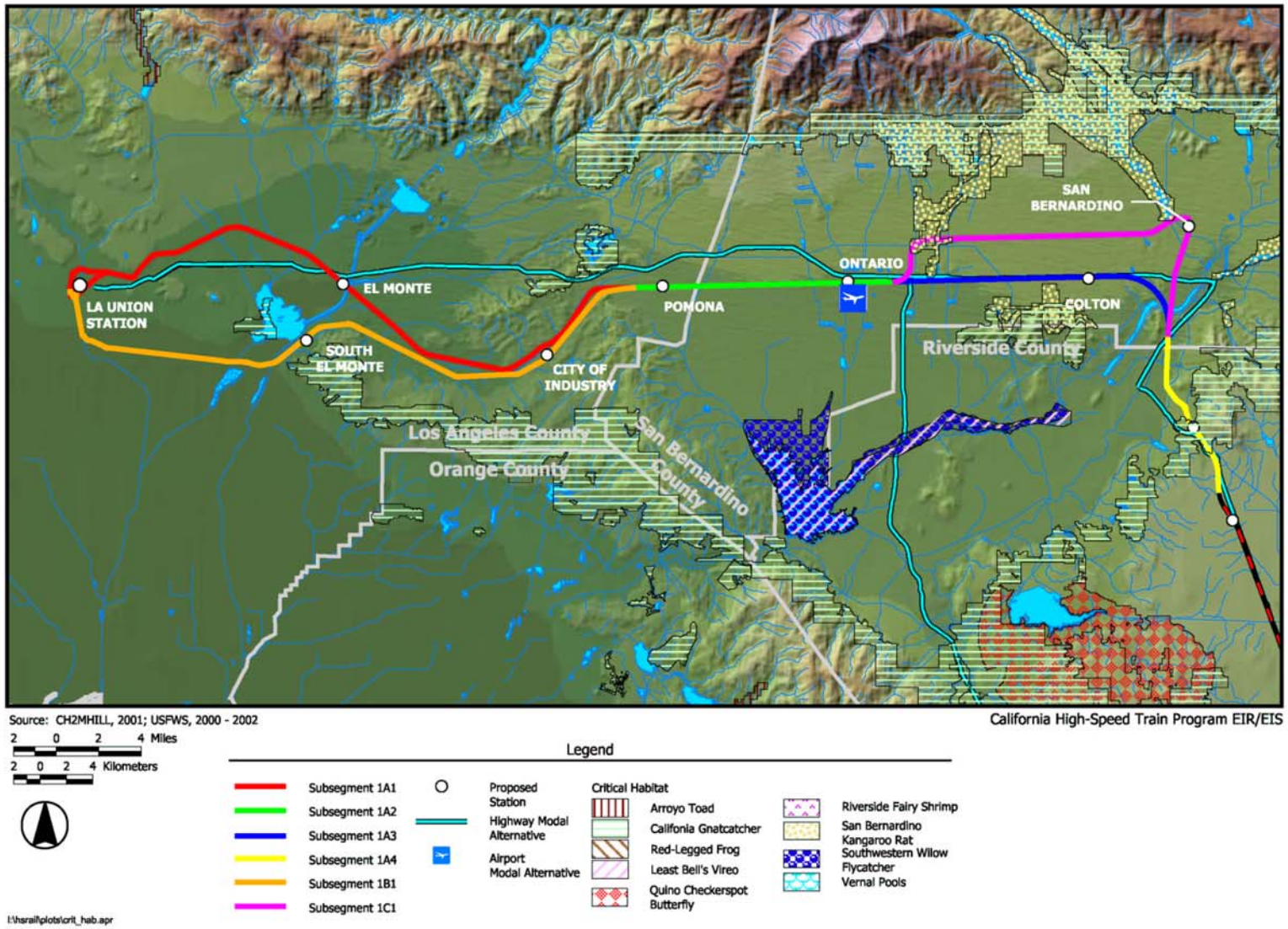


Figure 2.2-2a USFWS Designated Critical Habitat
L.A. Union Station to March ARB